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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,270	02/06/2001	Eiji Mayumi	81868.0025	4482

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EXAMINER

PEREZ, GUILLERMO

ART UNIT PAPER NUMBER

2834

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/778,270	Applicant(s) MAYUMI, EIJI	
	Examiner Guillermo Perez	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-16 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

1. Claims 1-5, and 7-10 are rejected under 35 U.S.C. 102(e) as being
anticipated by Hanazumi et al. (U. S. Pat. 6,046,519).

Referring to claim 1, Hanazumi et al. disclose a motor defining an axial direction, the motor comprising:

a plurality of core pairs (33A-B, 34A-B), each of the core pairs consisting of an inner core (34A-B) and an outer core (33A-B), arranged next to each other along the axial direction such that the inner cores (34A-B) are in contact with each other;

a coil (31A-B) wound around each of the core pairs (33A-B, 34A-B); and

a case (41) formed from a magnetic material that covers the coils (31A-B) wherein the case (41) is welded to at least the inner cores (34A-B) to form two independent magnetic circuits formed by the inner cores (34A-B), the case (41) and the outer cores (33A-B).

Referring to claim 2, Hanazumi et al. disclose that the case (41) is welded to the outer cores (33A-B).

Referring to claims 3 and 8, Hanazumi et al. disclose that each of the inner cores (34A-B) and each of the outer cores (33A-B) has teeth-like poles (36A-D);

the teeth-like poles (36B-C) on the inner cores (34A-B) and the teeth-like poles (36A,D) on the outer cores (33A-B) are alternately disposed to face a rotor magnet of a rotor (39) that is disposed inside the plurality of core pairs (33A-B, 34A-B); and

the case (41) is commonly affixed to outer circumference sections of the inner cores (34A-B) and outer cores (33A-B) that form the plurality of core pairs (33A-B, 34A-B).

Referring to claims 4 and 9, Hanazumi et al. disclose that the case (41) is formed from a curled thin plate.

Referring to claim 5 and 10, Hanazumi et al. disclose connection terminals to supply current to the coils (31A-B) connected to the inner cores (34A-B) and the outer cores (33A-B), wherein the case (6A) has an arc-shape to leave an opening for the connection terminals (1D).

Referring to claim 7, Hanazumi et al. disclose a motor defining an axial direction, the motor comprising:

a plurality of core pairs, each of the core pairs consisting of an inner core and an outer core, arranged next to each other along the axial direction such that the inner cores are in contact with each other;

a coil wound around each of the core pairs; and a case formed from a magnetic material that covers the coils wherein, the case is welded to at least the inner cores and

the outer cores to forms two independent magnetic circuits formed by the inner cores,
the case, and the outer cores;

wherein the motor is a stepping motor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Hanazumi et al. in view of Takehara (U. S. Pat.
6,163,952).

Hanazumi et al. discloses a motor as described on item 1 above. However,
Hanazumi et al. do not disclose that the case and the inner cores are welded at welding
spots at the end sections of the arc-shaped case and at a midpoint in the circumferential
direction between the end sections of the arc-shaped case.

Takehara discloses that the case (2) and the inner cores (3) are welded at
welding spots at the end sections of the arc-shaped case (2) and at a midpoint in the
circumferential direction between the end sections of the arc-shaped case (2).

Takehara's invention has the purpose of simplifying the assembly of the motor,
facilitating the miniaturization and thinning of the motor, and automating the assembly of
the machine.

It would have been obvious at the time the invention was made to modify the motor of Hanazumi et al. and provide it with welding configuration disclosed by Takehara for the purpose of simplifying the assembly of the motor, facilitating the miniaturization and thinning of the motor, and automating the assembly of the machine.

Allowable Subject Matter

Claims 12-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art's references of record do not disclose that the case is welded to the inner cores but not welded to the outer cores, to form two independent magnetic circuits formed by the inner cores, the case, and the outer cores. This will provide the stepping motor with a uniform rotational characteristic.

Response to Arguments

Applicant's arguments filed May 5, 2003 have been fully considered but they are not persuasive.

In response to Applicant's remark that Hanazumi says nothing about what parts of Hanazumi's yokes should be welded to the cup frame, and nothing about the specific location or locations of any such welding, it must be noted that claims 1 and 7 recite, "the case is welded to at least the inner cores and the outer cores", exactly like Hanazumi. Claims 1 and 7 do not recite what parts of the yokes should be welded to the cup frame, nor the specific location or locations of the welding. Hanazumi discloses that cramping or welding is required for contact of the cup frame with the yokes. Hanazumi discloses inner yokes, outer yokes, and a cup frame welded to the yokes, as claimed.

When Hanazumi describes yokes, is referring to the yokes 33A-B and 34A-B. This yokes include inner yokes 34A, 34B and outer yokes 33A, 33B. Hanazumi discloses that the cup frame is welded to these cores, as claimed.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., what parts of the yokes should be welded to the cup frame, "welding the cup frame to the inner parts of the yokes") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
July 25, 2003



Nicholas Ponomarenko
Primary Examiner
Technology Center 2806